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25 to correct a minor informality. Support for the amendment for this paragraph is apparent, and no new matter is added.

IN THE CLAIMS:

Please cancel claims 70-78

The pending claims are listed in the attached:

Appendix A1: Pending claims (Clean Version of Replacement Claims).

☒ Changes in the pending claims relative to the last version of record are reflected in:

Appendix A2: Version With Markings to Show Changes Made.

Please enter any changes reflected in Appendices A1 and A2.

REMARKS

Reconsideration of the rejections is respectfully requested.

The status of the claims is as follows:

Amended:	60, 63, 65, 66, 68, 69
Cancelled:	70-78
Pending:	60-69

The number of total claims and of independent claims remains less than the amount for which fees were previously paid. It is believed that no additional claim fees are required.

The claims have been amended to more clearly define the invention. Support for the amendments is either apparent, or is as described in the text below. Support for the amendments in claims 63 and 69 can be found, for example, at page 7, lines 7-14.

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Conclusion

In light of the above discussion and amendments, it is respectfully submitted that the claims are in condition for allowance. The issuance of a Notice of Allowance is earnestly solicited.

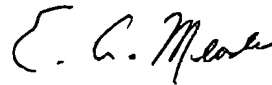
FEE DEFICIENCY

☒ If an extension of time is deemed required for consideration of this paper, please consider this paper to comprise a petition for such an extension of time; The Commissioner is hereby authorized to charge the fee for any such extension to Deposit Account No. 50-0250.

and/or

☒ If any additional fee is required for consideration of this paper, please charge Account No. 50-0250.

Respectfully submitted,



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APPENDIX A2: VERSION WITH MARKINGS TO SHOW CHANGES MADE

60. (Amended) An isolated polypeptide comprising a member selected from the group consisting of

- (a) an amino acid sequence comprising one of SEQ ID NOs:2, 4, 6 or 8; and
- (b) an immunogenic fragment of at least 15 amino acids that matches an aligned contiguous segment of SEQ ID NOs:2, 4, 6 or 8; selected from the following contiguous segments thereof (~~identified by first and last residue number~~):

1-15; 2-16; 3-17; 4-18; 5-19; 6-20; 7-21; 8-22; 9-23; 10-24; 11-25; 12-26; 13-27; 14-28; 15-29; 16-30; 17-31; 18-32; 19-33; 20-34; 21-35; 22-36; 23-37; 24-38; 25-39; 26-40; 27-41; 28-42; 29-43; 30-44; 31-45; 32-46; 33-47; 34-48; 35-49; 36-50; 37-51; 38-52; 39-53; 40-54; 41-55; 42-56; 43-57; 44-58; 45-59; 46-60; 47-61; 48-62; 49-63; 50-64; 51-65; 52-66; 53-67; 54-68; 55-69; 56-70; 57-71; 58-72; 59-73; 60-74; 61-75; 62-76; 63-77; 64-78; 65-79; 66-80; 67-81; 68-82; 69-83; 70-84; 71-85; 72-86; 73-87; 74-88; 75-89; 76-90; 77-91; 78-92; 79-93; 80-94; 81-95; 82-96; 83-97; 84-98; 85-99; 86-100; 87-101; 88-102; 89-103; 90-104; 91-105; 92-106; 93-107; 94-108; 95-109; 96-110; 97-111; 98-112; 99-113; 100-114; 101-115; 102-116; 103-117; 104-118; 105-119; 106-120; 107-121; 108-122; 109-123; 110-124; 111-125; 112-126; 113-127; 114-128; 115-129; 116-130; 117-131; 118-132; 119-133; 120-134; 121-135; 122-136; 123-137; 124-138; 125-139; 126-140; 127-141; 128-142; 129-143; 130-144; 131-145; 132-146; 133-147; 134-148; 135-149; 136-150; 137-151; 138-152; 139-153; 140-154; 141-155; 142-156; 143-157; 144-158; 145-159; 146-160; 147-161; 148-162; 149-163; 150-164; 151-165; 152-166; 153-167; 154-168; 155-169; 156-170; 157-171; 158-172; 159-173; 160-174; 161-175; 162-176; 163-177; 164-178; 165-179; 166-180; 167-181; 168-182; 169-183; 170-184; 171-185; 172-186; 173-187; 174-188; 175-189; 176-190; 177-191; 178-192; 179-193; 180-194; 181-195; 182-196; 183-197; 184-198; 185-199; 186-200; 187-201; 188-202; 189-203; 190-204; 191-205; 192-206; 193-207; 194-208; 195-209; 196-210; 197-211; 198-212; 199-213; 200-214; 201-215; 202-216; 203-217; 204-218; 205-219; 206-220; 207-221; 208-222; 209-223; 210-224; 211-225; 212-226; 213-227; 214-228; 215-229;

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**APPENDIX A2: VERSION WITH MARKINGS TO SHOW CHANGES MADE –
(continued)**

216-230; 217-231; 218-232; 219-233; 220-234; 221-235; 222-236; 223-237; 224-238; 225-239;
226-240; 227-241; 228-242; 229-243; 230-244; 231-245; 232-246; 233-247; 234-248; 235-249;
236-250; 237-251; 238-252; 239-253; 240-254; 241-255; 242-256; 243-257; 244-258; 245-259;
246-260; 247-261; 248-262; 249-263; 240-264; 251-265; 252-266; 253-267; 254-268; 255-269;
256-270; 257-271; 258-272; 259-273; 260-274; 261-275; 262-276; 263-277; 264-278; 265-279;
266-280; 267-281; 268-282; 269-283; 270-284; 271-285; 272-286; 273-287; 274-288; 275-289;
276-290; 277-291; 278-292; 279-293; 280-294; 281-295; 282-296; 283-297; 284-298; 285-299;
286-300; 287-301; 288-302; 289-303; 290-304; 291-305; 292-306; 293-307; 294-308; 295-309;
296-310; 297-311; 298-312; 299-313; 300-314; 301-315; 302-316; 303-317; 304-318; 305-319;
306-320; 307-321; 308-322; 309-323; 310-324; 311-325; 312-326; 313-327; 314-328; 315-329;
316-330; 317-331; 318-332; 319-333; 320-334; 321-335; 322-336; 323-337; 324-338; 325-339;
326-340; 327-341; 328-342; 329-343; 330-344; 331-345; 332-346; 333-347; 334-348; 335-349;
336-350; 337-351; 338-352; 339-353; 340-354; 341-355; 342-356; 343-357; 344-358; 345-359;
346-360; 347-361; 348-362; 349-363; 350-364; 351-365; 352-366; 353-367; 354-368; 355-369;
356-370; 357-371; 358-372; 359-373; 360-374; 361-375; 362-376; 363-377; 364-378; 365-379;
366-380; 367-381; 368-382; 369-383; 370-384; 371-385; 372-386; 373-387; 374-388; 375-389;
376-390; 377-391; 378-392; 379-393; 380-394; 381-395; 382-396; 383-397; 384-398; 385-399;
386-400; 387-401; 388-402; 389-403; 390-404; 391-405; 392-406; 393-407; 394-408; 395-409;
396-410; 397-411; 398-412; 399-413; 400-414; 401-415; 402-416; 403-417; 404-418; 405-419;
406-420; 407-421; 408-422; 409-423; 410-424; 411-425; 412-426; 413-427; 414-428; 415-429;
416-430; 417-431; 418-432; 419-433; 420-434; 421-435; 422-436; 423-437; 424-438; 425-439;
426-440; 427-441; and 428-442;

wherein the immunogenic fragment, when administered to a subject in a suitable composition
which can include an adjuvant, or a suitable carrier coupled to the polypeptide, raises ~~is capable~~

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**APPENDIX A2: VERSION WITH MARKINGS TO SHOW CHANGES MADE –
(continued)**

of raising an immune response that recognizes a polypeptide having the sequence of SEQ ID
NOs: 2, 4, 6 or 8.

63. (Amended) A fusion protein comprising the isolated polypeptide of Claim 60 and a
polypeptide selected to:

(a) provide T helper epitopes;

(b) facilitate purification of the isolated polypeptide from recombinant expression systems; or

(c) stabilize the isolated polypeptide during or assist in recombinant expression.

65. (Amended) The immunogenic composition of Claim ~~64~~ 55, wherein the composition
comprises at least one other Moraxella catarrhalis ~~Neisseria meningitidis~~ antigen.

66. (Amended) The isolated polypeptide of claim 60, wherein the isolated polypeptide
comprises the immunogenic fragment ~~is~~ selected from the ~~following~~ contiguous segments as set
forth in (b):

~~1-15; 2-16; 3-17; 4-18; 5-19; 6-20; 7-21; 8-22; 9-23; 10-24; 11-25; 12-26; 13-27; 14-28; 15-29;
16-30; 17-31; 18-32; 19-33; 20-34; 21-35; 22-36; 23-37; 24-38; 25-39; 26-40; 27-41; 28-42; 29-
43; 30-44; 31-45; 32-46; 33-47; 34-48; 45-49; 46-50; 37-51; 38-52; 39-53; 40-54; 41-55; 42-56;
43-57; 44-58; 45-59; 46-60; 47-61; 48-62; 49-63; 50-64; 51-65; 52-66; 53-67; 54-68; 55-69; 56-
70; 57-71; 58-72; 59-73; 60-74; 61-75; 62-76; 63-77; 64-78; 65-79; 66-80; 67-81; 68-82; 69-83;
70-84; 71-85; 72-86; 73-87; 74-88; 75-89; 76-90; 77-91; 78-92; 79-93; 80-94; 81-95; 82-96; 83-
97; 84-98; 85-99; 86-100; 87-101; 88-102; 89-103; 90-104; 91-105; 92-106; 93-107; 94-108; 95-
109; 96-110; 97-111; 98-112; 99-113; 100-114; 101-115; 102-116; 103-117; 104-118; 105-119;
106-120; 107-121; 108-122; 109-123; 110-124; 111-125; 112-126; 113-127; 114-128; 115-129;~~

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**APPENDIX A2: VERSION WITH MARKINGS TO SHOW CHANGES MADE –
(continued)**

~~116 130; 117 131; 118 132; 119 133; 120 134; 121 135; 122 136; 123 137; 124 138; 125 139;
126 140; 127 141; 128 142; 129 143; 130 144; 131 145; 132 146; 133 147; 134 148; 135 149;
136 150; 137 151; 138 152; 139 153; 140 154; 141 155; 142 156; 143 157; 144 158; 145 159;
146 160; 147 161; 148 162; 149 163; 150 164; 151 165; 152 166; 153 167; 154 168; 155 169;
156 170; 157 171; 158 172; 159 173; 160 174; 161 175; 162 176; 163 177; 164 178; 165 179;
166 180; 167 181; 168 182; 169 183; 170 184; 171 185; 172 186; 173 187; 174 188; 175 189;
176 190; 177 191; 178 192; 179 193; 180 194; 181 195; 182 196; 183 197; 184 198; 185 199;
186 200; 187 201; 188 202; 189 203; 190 204; 191 205; 192 206; 193 207; 194 208; 195 209;
196 210; 197 211; 198 212; 199 213; 200 214; 201 215; 202 216; 203 217; 204 218; 205 219;
206 220; 207 221; 208 222; 209 223; 210 224; 211 225; 212 226; 213 227; 214 228; 215 229;
216 230; 217 231; 218 232; 219 233; 220 234; 221 235; 222 236; 223 237; 224 238; 225 239;
226 240; 227 241; 228 242; 229 243; 230 244; 231 245; 232 246; 233 247; 234 248; 235 249;
236 250; 237 251; 238 252; 239 253; 240 254; 241 255; 242 256; 243 257; 244 258; 245 259;
246 260; 247 261; 248 262; 249 263; 240 264; 251 265; 252 266; 253 267; 254 268; 255 269;
256 270; 257 271; 258 272; 259 273; 260 274; 261 275; 262 276; 263 277; 264 278; 265 279;
266 280; 267 281; 268 282; 269 283; 270 284; 271 285; 272 286; 273 287; 274 288; 275 289;
276 290; 277 291; 278 292; 279 293; 280 294; 281 295; 282 296; 283 297; 284 298; 285 299;
286 300; 287 301; 288 302; 289 303; 290 304; 291 305; 292 306; 293 307; 294 308; 295 309;
296 310; 297 311; 298 312; 299 313; 300 314; 301 315; 302 316; 303 317; 304 318; 305 319;
306 320; 307 321; 308 322; 309 323; 310 324; 311 325; 312 326; 313 327; 314 328; 315 329;
316 330; 317 331; 318 332; 319 333; 320 334; 321 335; 322 336; 323 337; 324 338; 325 339;
326 340; 327 341; 328 342; 329 343; 330 344; 331 345; 332 346; 333 347; 334 348; 335 349;
336 350; 337 351; 338 352; 339 353; 340 354; 341 355; 342 356; 343 357; 344 358; 345 359;
346 360; 347 361; 348 362; 349 363; 350 364; 351 365; 352 366; 353 367; 354 368; 355 369;~~

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**APPENDIX A2: VERSION WITH MARKINGS TO SHOW CHANGES MADE –
(continued)**

~~356 370; 357 371; 358 372; 359 373; 360 374; 361 375; 362 376; 363 377; 364 378; 365 379;
366 380; 367 381; 368 382; 369 383; 370 384; 371 385; 372 386; 373 387; 374 388; 375 389;
376 390; 377 391; 378 392; 379 393; 380 394; 381 395; 382 396; 383 397; 384 398; 385 399;
386 400; 387 401; 388 402; 389 403; 390 404; 391 405; 392 406; 393 407; 394 408; 395 409;
396 410; 397 411; 398 412; 399 413; 400 414; 401 415; 402 416; 403 417; 404 418; 405 419;
406 420; 407 421; 408 422; 409 423; 410 424; 411 425; 412 426; 413 427; 414 428; 415 429;
416 430; 417 431; 418 432; 419 433; 420 434; 421 435; 422 436; 423 437; 424 438; 425 439;
426 440; 427 441; and 428 442.~~

68. (Amended) The immunogenic composition of Claim 67, wherein the composition comprises at least one other *Moraxella catarrhalis* ~~*Neisseria meningitidis*~~ antigen.

69. (Amended) A fusion protein comprising the isolated polypeptide of claim 66 and a polypeptide selected to:

- (a) provide T helper epitopes;
- (b) facilitate purification from a recombinant expression system, or
- (c) stabilize the isolated polypeptide during recombinant expression.

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APPENDIX B2: REPLACEMENT PARAGRAPHS (VERSION WITH MARKINGS TO SHOW CHANGES MADE, I.E., REDLINE)

Change 2

The polynucleotides of the invention may be used as components of polynucleotide arrays, preferably high density arrays or grids. These high density arrays are particularly useful for diagnostic and prognostic purposes. For example, a set of spots each comprising a different gene, and further comprising a polynucleotide or polynucleotides of the invention, may be used for probing, such as using hybridization or nucleic acid amplification, using ~~a~~-probes obtained or derived from bodily sample to determine the presence of a particular polynucleotide sequence or related sequence in an individual. Such a presence may indicate the presence of a pathogen, particularly *Moraxella catarrhalis*, and may be useful in diagnosing and/or prognosing disease or a course of disease. A grid comprising a number of variants of the polynucleotide sequence of SEQ ID NO:1, 3, 5 or 7 are preferred. Also preferred is a grid comprising a number of variants of a polynucleotide sequence encoding the polypeptide of SEQ ID NO:2, 4, 6, or 8.